

REMARKS

The Office Action dated July 26, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 12, 15, 21-24, 28, 32, and 35 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 40-53 have been added. No new matter has been added. Claims 2-11, 13-14, 16-17, and 19-20 have been cancelled without prejudice or disclaimer. Claims 1, 12, 15, 18, and 40-53 are currently pending and under consideration.

Claims 1-39 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2004/0081131 to Walton (Walton). It is respectfully submitted that the claims recite subject matter that is neither disclosed nor suggested in Walton.

Independent claim 1, upon which claims 12, 15, 18, 42, and 51-53 are dependent, recites a method of allocating subcarriers in a multicarrier modulation communication system. The method includes allocating a plurality of sets of sequential subcarriers to a plurality of users, wherein the size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users.

Independent claim 21, upon which claims 22 and 43 are dependent, recites a device for controlling multicarrier modulation communications, the device being configured to allocate a plurality of sets of sequential subcarriers to a plurality of users in

an allocation period. The size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users.

Independent claim 23, upon which claim 44 is dependent, recites a multicarrier modulation communication system, the multicarrier modulation communication system being configured to allocate a plurality of sets of sequential subcarriers to a plurality of users in an allocation period. The size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users.

Independent claim 24, upon which claims 25-27 and 45 are dependent, recites a method of multicarrier modulation transmission. The method includes transmitting at least one signal relating to at least one set of sequential subcarriers among a plurality of sets of sequential subcarriers allocated in an allocation period to a plurality of users. The size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users.

Independent claim 28, upon which claims 29-31 and 46 are dependent, recites a method of multicarrier modulation reception. The method includes receiving at least one signal relating to at least one set of sequential subcarriers among a plurality of sets of sequential subcarriers allocated to a plurality of users in an allocation period. The size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users.

Independent claim 32, upon which claims 33-34, 38, 39, and 47 are dependent, recites a device for multicarrier modulation transmission, the device being configured to

transmit at least one signal relating to at least one set of sequential subcarriers among a plurality of sets of sequential subcarriers allocated to the plurality of users in an allocation period. The size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users.

Independent claim 35, upon which claims 36, 37, and 48 are dependent, recites a device for multicarrier modulation reception, the device being configured to receive at least one signal relating to at least one set of sequential subcarriers among a plurality of sets of sequential subcarriers allocated to a plurality of users in an allocation period. The size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users.

As will be discussed below, Walton fails to disclose or suggest all of the elements of any of the presently pending claims.

Walton generally describes using OFDM symbols of different sizes to achieve greater efficiency for OFDM systems. The system traffic may be arranged into different categories (e.g., control data, user data, and pilot data). For each category, one or more OFDM symbols of the proper sizes may be selected for use based on the expected payload size for the traffic in that category. For example, control data may be transmitted using OFDM symbols of a first size, user data may be transmitted using OFDM symbols of the first size and a second size, and pilot data may be transmitted using OFDM symbols of a third size or the first size. See abstract of Walton.

It is respectfully submitted that Walton fails to disclose or suggest, at least, “allocating a plurality of sets of sequential subcarriers in a multicarrier modulation communication system to a plurality of users, wherein the size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users,” as recited in independent claims 1, 21, 23, 24, 28, 32, and 35.

As discussed above, Walton merely discloses using OFDM symbols of different sizes to minimize cyclic prefix overhead and maximize packing efficiency. See paragraph [0012] of Walton. Walton merely discloses that for OFDMA, multiple users share the large OFDM symbol using frequency domain multiplexing. This is achieved by reserving a set of subbands for signaling and allocating different disjoint sets of subbands to different users. See paragraph [0010] of Walton. However, there is no teaching or suggestion in Walton of **allocating** a plurality of sets of sequential subcarriers in a multicarrier modulation communication system to a plurality of users, wherein the wherein the **size** of a set of sequential **subcarriers** is **greater** than the **smallest coherence bandwidth** of the plurality of **users**, as recited in the presently pending claims. (Emphasis Added).

Thus, Walton fails to disclose or suggest, at least, “allocating a plurality of sets of sequential subcarriers in a multicarrier modulation communication system to a plurality of users, wherein the size of a set of sequential subcarriers is greater than the smallest coherence bandwidth of the plurality of users,” as recited in independent claims 1, 21, 23,

24, 28, 32, and 35. As such, it is respectfully requested that the rejection of independent claims 1, 21, 23, 24, 28, 32, and 35 be withdrawn.

Claims 22, 25-27, 29-31, 33-34, and 36-39 are dependent upon claims 21, 24, 28, 32, and 35. Accordingly, claims 22, 25-27, 29-31, 33-34, and 36-39 should be allowed at least for their dependencies upon claims 21, 24, 28, 32, and 35.

In view of the above, it is respectfully submitted that the claimed invention recites the subject matter which is neither disclosed or suggested in the cited prior art. Also, it is respectfully submitted that the subject matter is more than sufficient to render the claimed invention unobvious to a person of ordinary skill in the art. Therefore, it is respectfully requested that claims 1, 12, 15, 18, and 21-53 be allowed and this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time – 1 Month
Additional Claim Fee Transmittal
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